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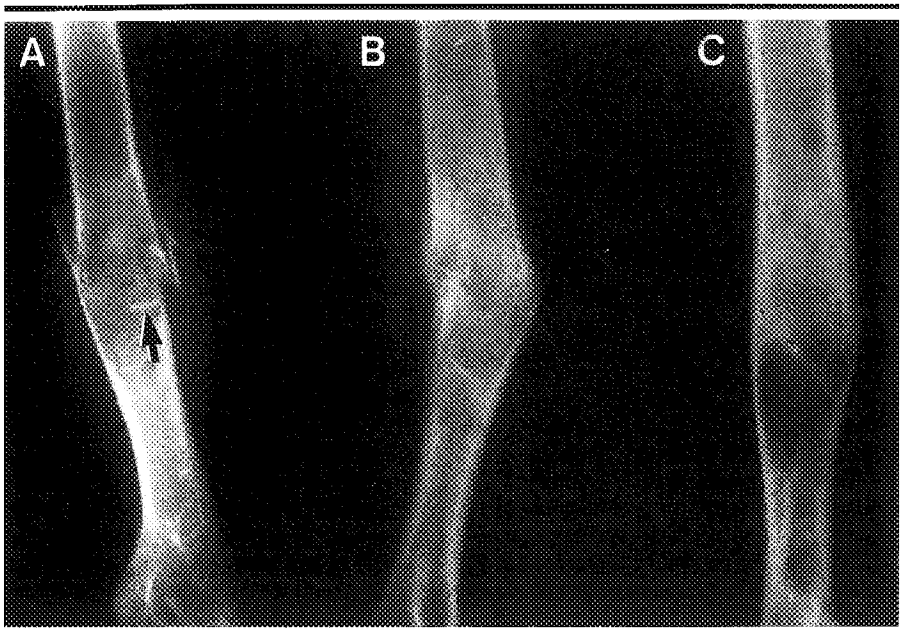


*A,* Radiograph shows a fracture with a simple bone cyst and the fallen fragment sign (arrow). *B,* Radiograph shows reparative changes surrounding the lesion. *C,* Radiograph shows a pattern in the humerus that is suggestive of fibrous dysplasia.

***Dr McPherson and colleagues respond:***

We thank Dr Krige and colleagues for their interest in our article (1) and are pleased that they too have found the transjejunal approach to be helpful in the combined management of complex biliary strictures and stones. We emphasize that our experience indicates that the technique can be usefully extended to assist in the palliation of malignant disease.

In addition to the "runway lights" clips used by Krige and colleagues, a variety of methods and devices used to mark the fixation site, including the wire loop of Cameron and Frazer (2), have been described. Any development that makes loop access easier is welcome, but we point out that our success rate of 96% with the addition of percutaneous transhepatic cholangiography on seven occasions (92% without the addition) is comparable to the 98% success rate reported by Dr Krige and colleagues. It is important that each institution adopt a standardized method of marking the loop that is agreeable to both surgeons and interventional radiologists. We concur with the assertion that it is important to avoid kinking or redundancy within the access loop.

Standard angiographic catheters such as the cobra and headhunter 5-F catheters favored by Dr Krige and colleagues can be successfully manipulated through the loop, across the anastomosis, and within the intrahepatic ducts in most patients, but we have found a catheter (Gibson Biliary Catheter; Cook, Brisbane, Australia) purposely made for biliary manipulation to be superior. The high torque control of this 6-F nylon catheter, with its very short distal bend and soft atraumatic tip, makes it easier to manipulate across the many acute angles that may be encountered.

Removal of intraductal calculi is often aided by the softness of the stones. Hard calculi are more difficult to deal with, and, if appropriately located, can be dealt with by means of segmentectomy, particularly in segments II and III.

The endorsement of the technique by Dr Krige and colleagues adds weight to our recommendation that superficially fixing and marking one limb should be a routine part of all interventions with Roux-en-Y biliary-enteric anastomoses, irrespective of whether the surgery is performed for benign or malignant disease. This opportunity to provide a safe and effective means of subsequent biliary intervention should not be neglected.

**References**

1. McPherson SJ, Gibson RN, Collier NA. Percutaneous transjejunal biliary intervention: 10-year experience with access via Roux-en-Y loops. Radiology 1998; 206:665–672.
2. Cameron DC, Frazer CK. The Hutson loop and prosthesis: clinical uses in hepatobiliary intervention. Australas Radiol 1995; 39:159–165.

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## Fallen Fragment Sign

**From:**

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Editor:

We read with interest the article by Dr Killeen on the fallen fragment sign in the April 1998 issue of *Radiology* (1).

Described is a case where the fallen fragment sign has been very useful in the diagnosis.

An 8½-year-old girl had a pathologic fracture of the diaphysis of the left humerus; the most likely diagnosis was a simple bone cyst (Figure, part A). One unusual feature of the lesion was that it had grown into the distal third of the shaft of the humerus. It is more usual for the ultimate location of an unhealed cyst to be at the junction of the middle and distal thirds because of the differential growth of the proximal and distal ends of the humerus. Nevertheless, the original diagnosis of a solitary cyst was probable, and the falling fragment of cortical bone within the lesion substantiated such a diagnosis.

However, the correct diagnosis was not established by the orthopedic surgeon when the fracture occurred. On further plain radiographs obtained 2 months later (Figure, part B), the changes in the bone surrounding the lesion were reparative.

One year after the fracture occurred (Figure, part C), the clinicians suspected fibrous dysplasia. Biopsy was performed; the histopathologic report was noncontributory, as it indicated that the biopsy failed to reach the lesion and included only small fragments of the cortex. The pathologist, however, concluded that the diagnosis of fibrous dysplasia was acceptable.

The diagnosis of fibrous dysplasia is certainly tenable, particularly if one indicates that cystic change had taken place in the lesion. However, if the initial radiograph had been considered, the diagnosis of simple bone cyst would have been established, even though it is always difficult to make a diagnosis when the anatomy has been distorted by a fracture.


**Reference**

1. Killeen KL. The fallen fragment sign. Radiology 1998; 207:261–262.


## Anterolateral Soft-Tissue Impingement of the Ankle


**From:**

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Editor:

This letter is in response to the article by Dr Farooki and colleagues in the May 1998 issue of *Radiology* (1).

In September 1997, I read three articles related to the topic of anterolateral soft-tissue impingement of the ankle (2–4). In reviewing the first of the three (2), I found that in every example shown of anterolateral soft-tissue impingement, a joint effusion was present. It was this joint fluid that allowed the visualization of the abnormal soft tissue projecting into the gutter. For this reason, I have been performing magnetic resonance (MR) arthrography of the ankle after injecting a mixture of saline and gadoteridol. The arthrographic procedure is simple to perform, and I am uniformly able to fill both the medial and lateral gutters. This has allowed me to diagnose anterolateral soft-tissue impingement accurately and has improved visualization of the anterior talofibular ligament. When the patient did not have a joint effusion and I did not inject the joint, there was no way to make this diagnosis.


**References**

1. Farooki S, Yao L, Seeger LL. Anterolateral impingement of the ankle: effectiveness of MR imaging. Radiology 1998; 207:357–360.
2. Rubin DA, Tishkoff NW, Britton CA, Conti SF, Towers JD. Anterolateral soft-tissue impingement in the ankle: diagnosis using MR imaging. AJR 1997; 169:829–835.
3. DeBarardino TM, Arciero RA, Taylor DC. Arthroscopic treatment of soft-tissue impingement of the ankle in athletes. Arthroscopy 1997; 13:492–498.
4. Egol KA, Parisien JS. Impingement syndrome of the ankle caused by a medial meniscoid lesion (case report). Arthroscopy 1997; 13:522–525.


### *Dr Yao responds:*

I anticipate that intraarticular injection would improve the MR imaging evaluation of anterolateral synovial impingement of the ankle. Unfortunately, in my practice experience, specific MR imaging referrals for evaluation of ankle impingement are not the rule; hence, the number of cases accrued by us was indeed small for the duration of the study (1). I am interested in knowing how ankles are selected for intraarticular injection before MR imaging: Can the decision be based on the clinical presentation?

In our study, the diagnostic accuracies of MR imaging in the 13 ankles with and in the 19 control ankles without joint effusions were 69% (nine of 13 ankles) and 58% (11 of 19 ankles), respectively. In subjects with joint effusions, the finding of soft-tissue fullness in the lateral gutter was also not entirely specific (two false-positive findings). A study with findings that document an improvement in specificity, as well as in sensitivity, for the diagnosis of anterolateral impingement with MR arthrography would certainly be much welcomed by those of us who evaluate and manage this condition.


**Reference**

1. Farooki S, Yao L, Seeger LL. Anterolateral impingement of the ankle: effectiveness of MR imaging. Radiology 1998; 207:357–360.



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